

***Code Number and Title:***

LRI-ECO27: The Use of Ecosystem Services in Targeting Risk Assessment of Chemicals in the Environment

***Background***

Ecosystem Services, ES, are the benefits people get from nature. They are the flows from natural capital stocks, where natural capital includes ecosystems, species, freshwater, land, minerals, the air and oceans. Identifying which specific services need to be protected at landscape or larger scales can inform management decisions. Combining an understanding of which habitats and organisms are important in providing ES with an assessment of how these can be exposed to chemicals enables an assessment of the potential impact that chemicals may have on key ecological protection goals. However, the science required to implement such an approach needs further development.

Nevertheless, the ES concept is becoming incorporated into government policy, for example, the European Commission has adopted an ambitious new strategy to halt the loss of biodiversity and ES in the EU by 2020 (1). This has already led to initiatives to incorporate the concept into chemical assessment and management, e.g. EFSA framework for pesticides (2, 3). In broader terms, improving ecological relevance in chemical risk assessment, e.g. via application of ecological thinking, has been identified a key need by the EU scientific committees (4).

An ECETOC task force on the role of ES in targeting the risk assessment of chemicals was initiated in 2013 and is currently assessing how the EFSA framework might be applied to a broad range of chemical types and exposure scenarios (5). The task force has begun to identify further research needed for a framework to be broadly applicable to chemicals in general and is expected to conclude before the end of 2014. It would be appropriate to consider this information in the approach proposed to address this RfP.

***Objectives***

To facilitate engagement of the chemical industry, academia and regulators to help develop and evaluate the ES approach in guiding risk assessment schemes for any type of xenobiotic chemical.

***Scope***

- A multidisciplinary team with expertise in chemical risk assessment and ecology.
- Assessment of how current risk assessment methods, including testing and modelling, could be modified to assess impacts on ecosystem service-providing organisms/functions.
- Identification of development needs and how they may be addressed.
- Iteration of ideas from the project team with regulators and industry through development of white papers and focused workshops, e.g. a first workshop to develop initial views and concerns, a second to discuss solutions and a third to disseminate outcomes.
- Interaction with key regulatory agencies including ECHA, EFSA, DG Enterprise.

***Deliverables***

The final report shall contain an executive summary (2 pages max), a main part (max. 50 pages) and a detailed bibliography. It is expected that the findings will be developed into at least one peer reviewed publication, following poster(s) and presentation(s) at suitable scientific conference(s).

***Cost and Timing***

Start in early 2015, duration 2 years  
Budget in the order of €300,000

***Partnering/Co-funding***

Applicants should provide an indication of additional partners and funding opportunities that can be appropriately leveraged as part of their proposal. Partners can include, but are not limited to industry, government/regulatory organizations, research institutes, etc. Statements from potential partners should be included in the proposal package.

***Fit with LRI objectives/Possible regulatory and policy impact involvements/  
Dissemination***

Applicants should provide information on the fit of their proposal with LRI objectives and an indication on how and where they could play a role in the regulatory and policy areas. Dissemination plans should also be laid down.

***References***

- (1) European Commission (2011). Our life insurance, our natural capital: an EU biodiversity strategy to 2020 COM/2011/0244 final.
- (2) EFSA Scientific Opinion on the development of specific protection goal options for environmental risk assessment of pesticides, in particular in relation to the revision of the Guidance Documents on Aquatic and Terrestrial Ecotoxicology EFSA Journal 2010;8(10):1821
- (3) Development of a framework based on an ecosystem services approach for deriving specific protection goals for environmental risk assessment of pesticides. Karin M. Nienstedt, Theo C.M. Brock, Joke van Wensem, Mark Montforts, Andy Hart, Alf Aagaard, Anne Alix, Jos Boesten, Stephanie K. Bopp, Colin Brown, Ettore Capri, Valery Forbes, Herbert Köpp, Matthias Liess, Robert Luttik, Lorraine Maltby, José P. Sousa, Franz Streissl, Anthony R. Hardy. Science of the Total Environment 415 (2012) 31-38.
- (4) SCENIHR (Scientific Committee on Emerging and Newly Identified Health Risks), SCHER (Scientific Committee on Health and Environmental Risks), SCCS (Scientific Committee on Consumer Safety), Preliminary report on Addressing the New Challenges for Risk Assessment, 8 October 2012



**CEFIC Long-range Research Initiative  
Request for Proposals (RfP)**



- (5) Maltby L *et al.* Use of Ecosystem Services Potentially Affected By Chemicals For Setting Protection Goals And The Needs Of Risk Assessment. Poster presentation at the SETAC Europe 24th annual meeting. Basel, Switzerland. May 2014.

**DEADLINE FOR SUBMISSIONS: August 31, 2014**

Please visit [www.cefic-lri.org](http://www.cefic-lri.org) for general information about the LRI funding programme, guidelines for grant applications and links to application documents.

For further assistance do not hesitate to contact the LRI Secretariat by e-mail at [lri@cefic.be](mailto:lri@cefic.be) or by phone on 0032 (0)2 676 7368.